

Rpt. 4a.

REPORT ON STEAM TURBINE MACHINERY

Sld. No. 102877

29 MAY 1936

Date of writing Report 28th Apr 1936 When handed in at Local Office

5 MAY 1936

Port of London

No. in Survey held at West Humber

Date, First Survey 5th Feb 1936Last Survey 28th Apr 1936

Reg. Book.

ST. HELENA

(Number of Visits 12)

on the

Tons Gross 4313
Net 2605

Built at Sunderland

By whom built J. L. Thompson & Sons

Yard No. 573

When built 1936

Engines made at Humber-on-Tyne

By whom made Humber Marine Eng Co.

Engine No. 4.C.

When made 1936

Boilers made at

By whom made

Boiler No.

When made

Shaft Horse Power at Full Power 1800

1468 See Humber L.L. 12-6-36.

Port belonging to

Nom. Horse Power as per Rule

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which Vessel is intended

STEAM TURBINE ENGINES, &c.—Description of Engines

No. of Turbines Ahead Direct coupled, single reduction geared to propelling shafts. No. of primary pinions to each set of reduction gearing
Astern double reduction geared

direct coupled to Alternating Current Generator phase periods per second
for supplying power for driving Direct Current Generator rated Kilowatts Volts at revolutions per minute;
Propelling Motors, Type
rated Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

TURBINE BLADING.	H.P.			I.P.			L.P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION												
2ND												
3RD												
4TH												
5TH												
6TH												
7TH												
8TH												
9TH												
10TH												
11TH												
12TH												

RECIP. ENG. 1000 MAX.

RECIP. ENG. H.P. 305

1st reduction wheel 400

Shaft Horse Power at

Revolutions per minute, at full power, of each Shaft

TURBINE 800 MAX.

TURBINE L.P. 3446

main shaft 61

Rotor Shaft diameter at journals

Pitch Circle

1st pinion 6"

1st reduction wheel 52.2"

Width of

1st reduction wheel 16"

H.P.

Diameter

2nd pinion 11.666"

main wheel 75.333"

Face

main wheel 30"

I.P.

RECIP. ENG. PINION 15"

1st pinion 12"

1st reduction wheel 12"

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings

2nd pinion 1'-10"

main wheel 1'-10"

Flexible Pinion

RECIP. ENG. 5 1/4"

Pinion Shafts, diameter at bearings

External 1st 4 1/2"

2nd 8 3/4"

diameter at bottom of pinion teeth

1st 5.56"

Shafts, diameter

TURBINE 4 3/4"

1st 8 3/4"

1st 10 1/2"

RECIP. ENG. 5 1/4" GORE

Generator Shaft, diameter at bearings

2nd 10.933"

Wheel Shafts, diameter at bearings

main 13 1/4"

diameter at wheel shroud, main 16"

Propelling Motor Shaft, diameter at bearings

as per rule

as per rule

as per rule

Intermediate Shafts, diameter

as fitted 12

Thrust Shaft, diameter at collars

as fitted 13

Tube Shaft, diameter

as fitted

as fitted

Screw Shaft, diameter

as per rule

Is the tube shaft fitted with a continuous liner

as per rule

Bronze Liners, thickness in way of bushes

as per rule

as fitted

Thickness between bushes

as per rule

Is the after end of the liner made watertight in the propeller boss

as fitted

If the liner is in more than one length are the junctions

made by fusion through the whole thickness of the liner

If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

or other appliance fitted at the after end of the tube shaft

Length of Bearing in Stern Bush next to and supporting propeller

Is an approved Oil Gland

Propeller, diameter

Pitch

No. of Blades

State whether Movable

If Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine

Total Developed Surface

square feet.

Can the H.P. or L.P. Turbine exhaust direct to the

Condenser

No. of Turbines fitted with astern wheels

Feed Pumps

Pumps connected to the Main Bilge Line

No. and size

How driven

Lubricating Oil Pumps, including Spare Pump, No. and size

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size

In Engine and Boiler Room

In Holds, &c.

Main Water Circulating Pump Direct Suctions, No. and size

Independent Power Pump Direct Suctions to the Engine Room

Bilges, No. and size

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Are all Sea Connections fitted direct on the skin of the ship

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the Overboard Discharges above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Are the Blow Off Cocks fitted with a spigot and brass covering plate

How are they protected

Have they been tested as per rule

What pipes pass through the bunkers

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another

Is the Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

Lloyd's Register Foundation

W1153-0063

BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers

Is Forced Draft fitted

No. and Description of Boilers

Working Pressure

Is a Report on Main Boilers now forwarded?

Is a Donkey Boiler fitted?

If so, is a report now forwarded?

Plans. Are approved plans forwarded herewith for Shafting Main Boilers

Auxiliary Boilers

Donkey Boilers

(If not state date of approval)

Superheaters

General Pumping Arrangements

Oil Fuel Burning Arrangements

Spare Gear. State the articles supplied:—

The foregoing is a correct description, OF GEARING

R. P. Hughes

Manufacturer

Dates of Survey while building

During progress of work in shops --

During erection on board vessel ---

Total No. of visits

1936 Feb 5. 18. 26 Mar 5. 16. 23. 30 Apr 9. 16. 22. 23. 28

Dates of Examination of principal parts—Casings

Rotors

Blading

Gearing 23. 4. 36

Wheel shaft 6. 2. 36

Thrust shaft

Intermediate shafts

Tube shaft

Screw shaft

Propeller

Stern tube

Engine and boiler seatings

Engine holding down bolts

Completion of pumping arrangements

Boilers fixed

Engines tried under steam

Main boiler safety valves adjusted

Thickness of adjusting washers

Rotor shaft, Material and tensile strength

Identification Mark

Flexible Pinion Shafts Material and tensile strength

Steel

55 to 65 tons

Identification Mark

Pinion shafts Material and tensile strength

Steel

45 to 50 tons

Identification Mark

1st Reduction Wheel Shaft, Material and tensile strength

Steel

28. 32 tons

Identification Mark

Wheel shaft, Material

Steel

Identification Mark

220YDS 271 CSP

Thrust shaft, Material

Identification Mark

Intermediate shafts, Material

Identification Marks

Tube shaft, Material

Identification Marks

Screw shaft, Material

Identification Marks

Steam Pipes, Material

Test pressure

Date of test

Is an installation fitted for burning oil fuel

Is the flash point of the oil to be used over 150°F.

Have the requirements of the Rules for the use of oil as fuel been complied with

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo

If so, have the requirements of the Rules been complied with

Is this machinery a duplicate of a previous case

If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. This gearing has been constructed under special survey in accordance with approved plans and Rule Requirements, the materials made at works approved by the Society and tested in accordance with rules. The workmanship is good.

This gearing is satisfactory in my opinion for installation under under special survey in a cleared vessel with a view to notation of +LMC (with date) on completion of installation

The amount of Entry Fee

Special

Donkey Boiler Fee

Travelling Expenses (if any)

When applied for,

When received,

Committee's Minute

FRI. 24 JUL 1936

Assigned

see J. H. Machy Rph.

Edw. Ewing

Engineer Surveyor to Lloyd's Register of Shipping.



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